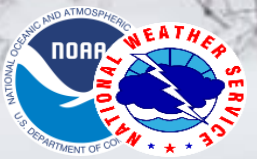


# 2<sup>nd</sup> 2021 Spring Flood Outlook

Released Thursday February 25<sup>th</sup>



NATIONAL WEATHER SERVICE-LA CROSSE, WI

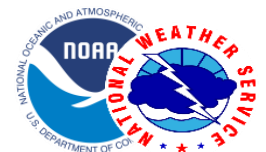
# Main Message

River	Spring Flood Risk
Mississippi River (Main-Stem)	Near normal
Mississippi Tributaries	Near normal Slightly above (NE IA into SW WI)

## Factors For This Years Near Normal Spring Flood Risk

- Overall drier pattern during the fall and this winter. Soils had a chance to dry out following the wet conditions of 2018-2019, streamflow values at or near normal.
- Early winter rain and a few rounds of heavier snows across northeast IA and southwest WI is slightly nudging the flood risk near to slightly above normal.

**IMPORTANT: Flood risk will depend on future precipitation and temperature trends. Things can change. Stay up to date with the latest information.**



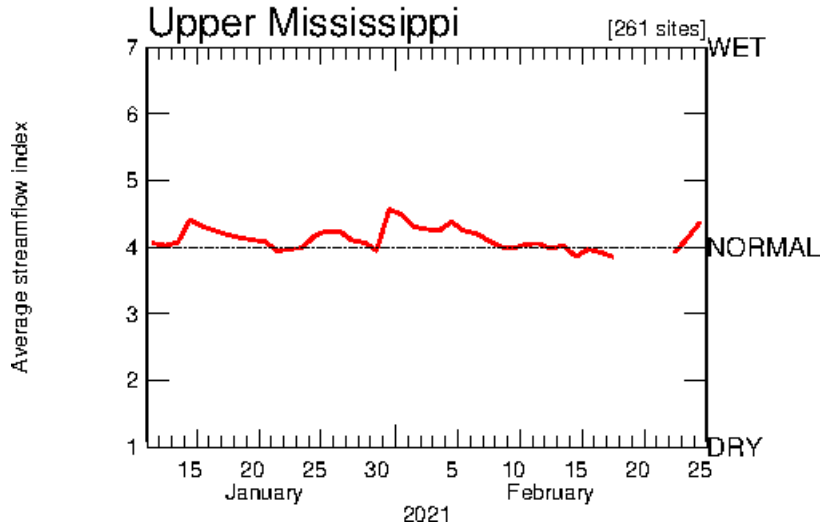
# Spring Flood Threat Checklist

Potential Spring Flooding Factors (Link For More Info)	Impact to Potential Spring Flooding Risk			
	NONE/LOWER	LIMITED	ELEVATED	SIGNIFICANT
<b>River Levels</b> <a href="#">USGS WaterWatch</a>	Normal Levels			✓
<b>Soil Moisture</b> <a href="#">CPC Soil Moisture</a>	Lower/Near Normal			✓
<b>Winter Precipitation</b> <a href="#">CPC Outlooks</a>	Near to Below Normal			✓
<b>Snowpack/Liquid Equivalent</b> <a href="#">Snow Analysis</a>	Generally Below Normal			✓
<b>Rate of Snowmelt</b> <a href="#">Snow Analysis(See Snow Melt)</a>	Slower So Far (Ideal melting, above freezing during the day, refreezing overnight)			✓
<b>Frost Depth</b> <a href="#">Frost Depth Map</a>	Shallow Frost (5-16")			✓
<b>Spring Temperatures</b> <a href="#">CPC Outlooks</a>	To Be Determined			Above normal possible?
<b>Spring Precipitation</b> <a href="#">CPC Outlooks</a>	To Be Determined			Small chance for above normal?

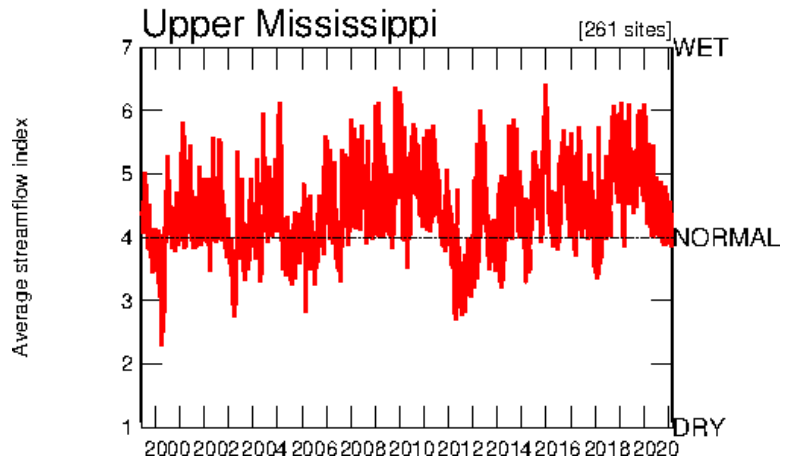
# Streamflow Conditions

## Upper Mississippi Basin

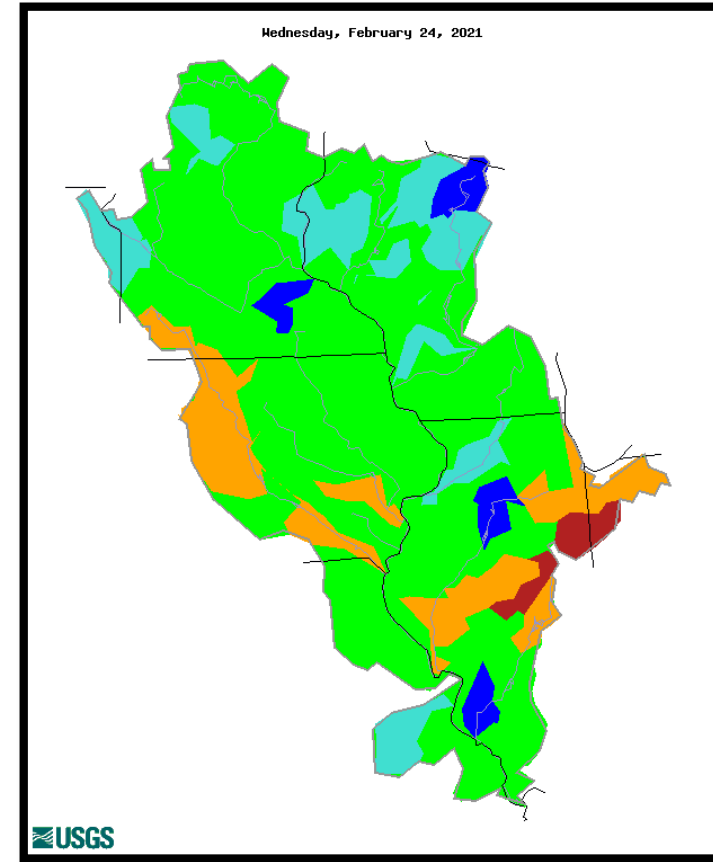
Last 45 Days



Since June 22, 1999

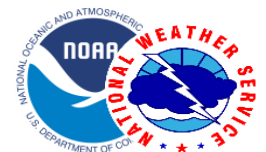


Average Past 28 Days



Explanation - Percentile classes

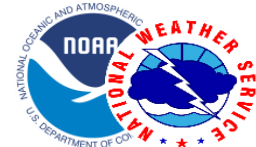
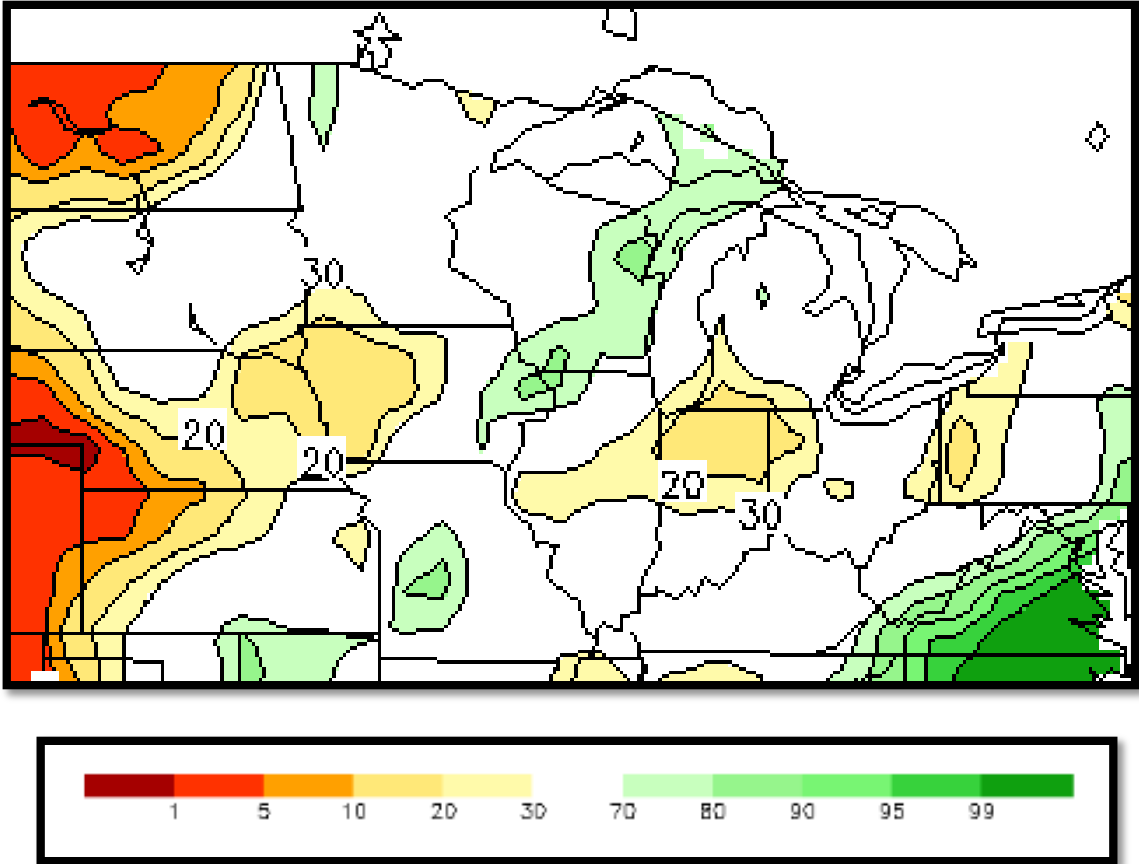
Low	<10	10-24	25-75	76-90	>90	High	No Data
	Much below normal	Below normal	Normal	Above normal	Much above normal		



# Surface Soil Moisture

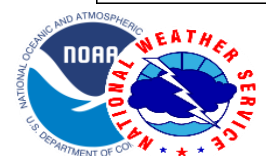
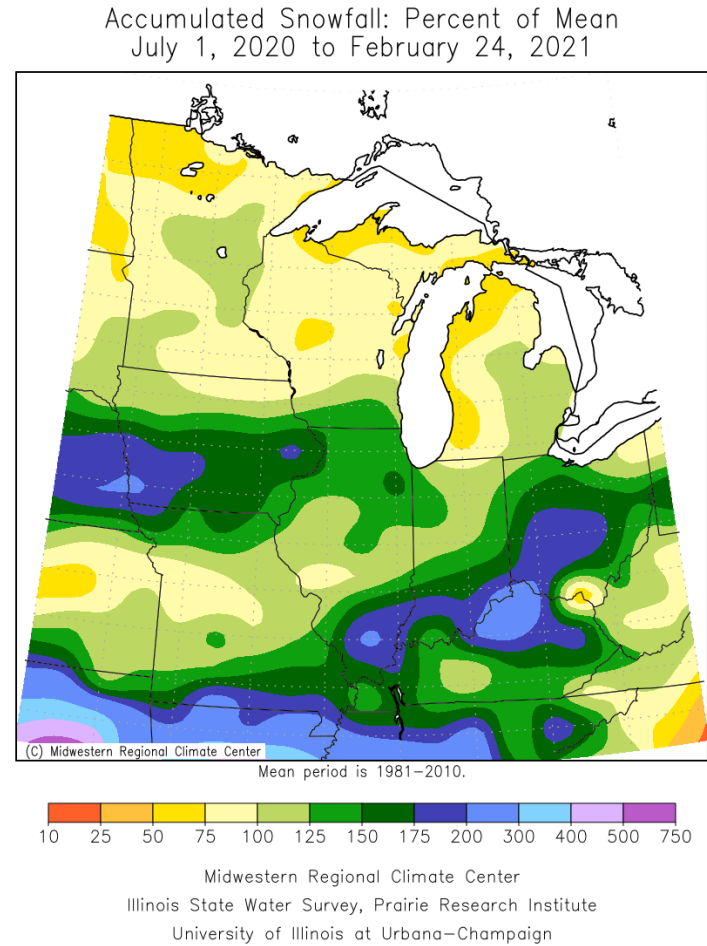
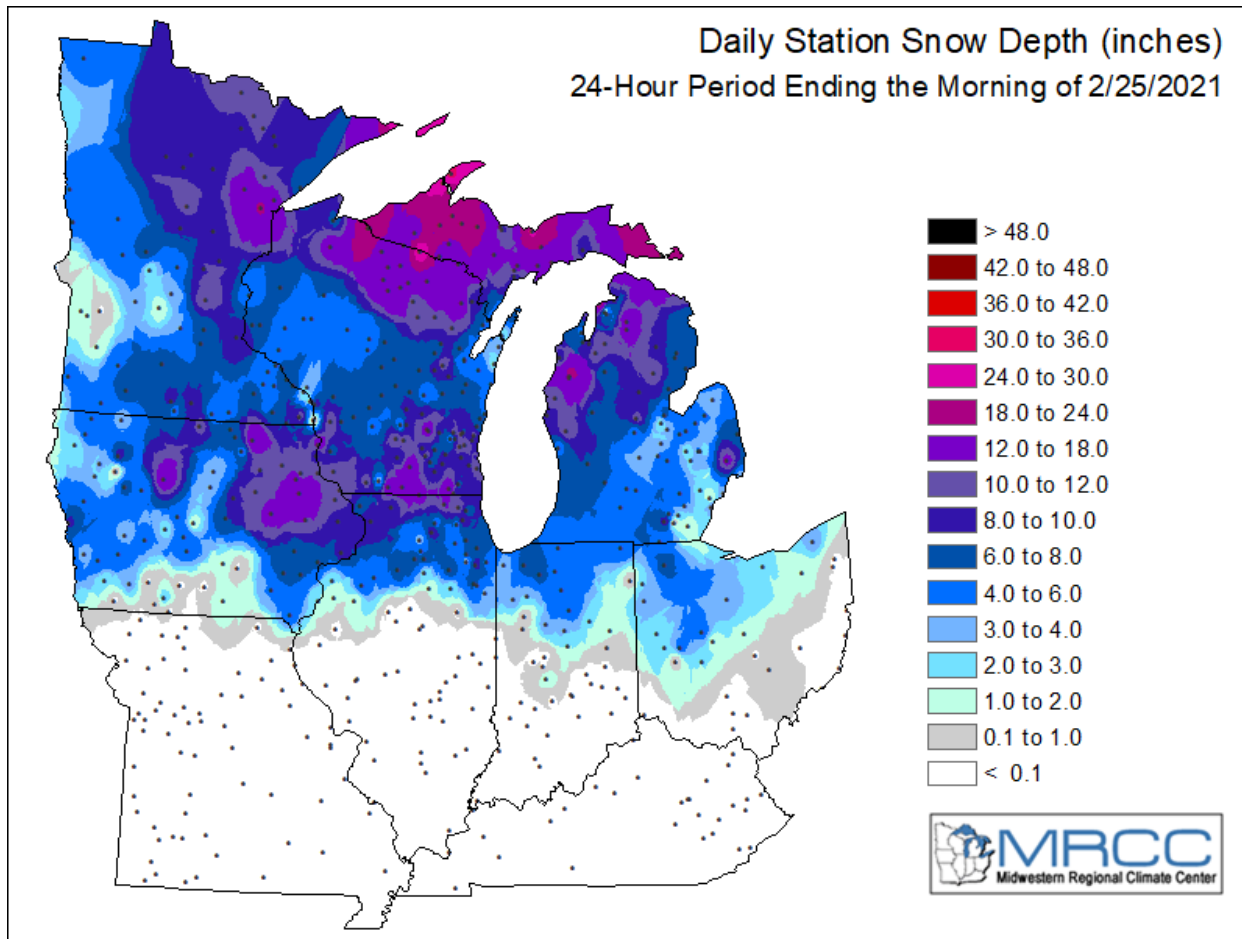
February 24, 2021 Soil Moisture Ranking Percentile

Soil moisture values near normal. A few areas with higher soil moisture over northeast, IA and southwest, WI



# Snowfall So Far....

**Below Normal Snowfall Across Much of The Area So Far...**



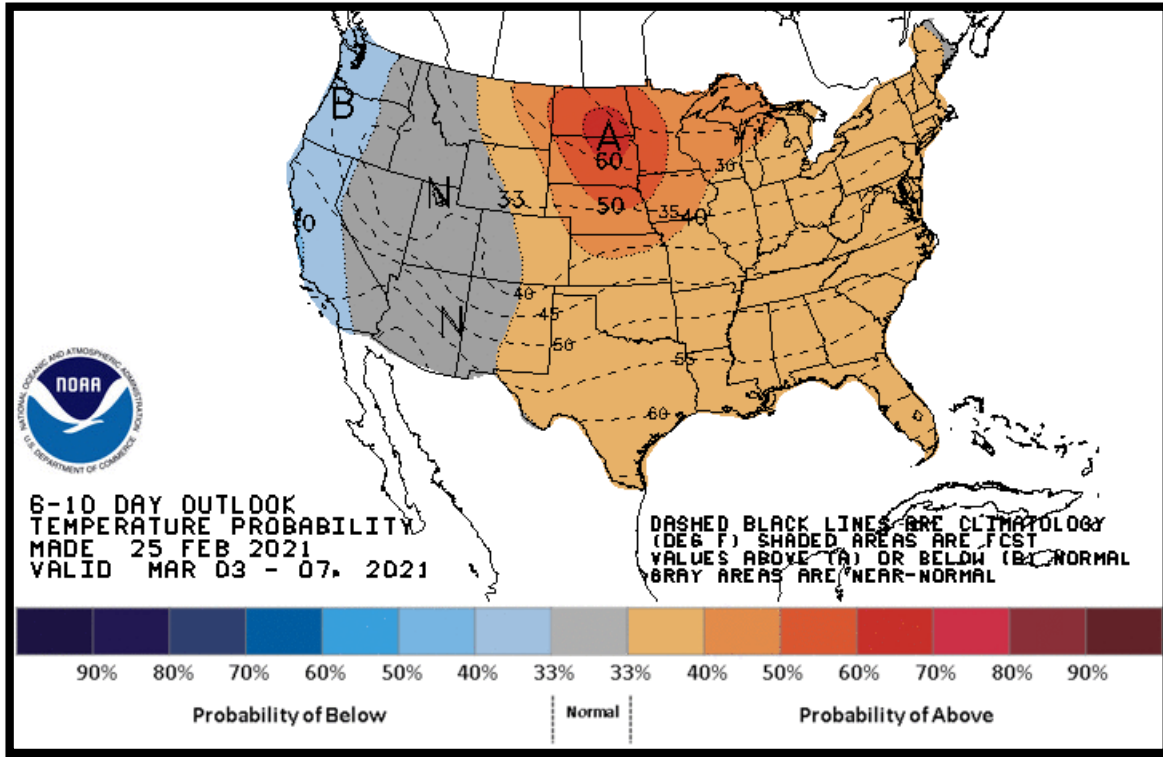




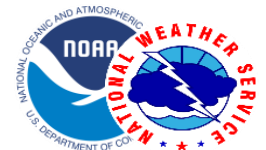
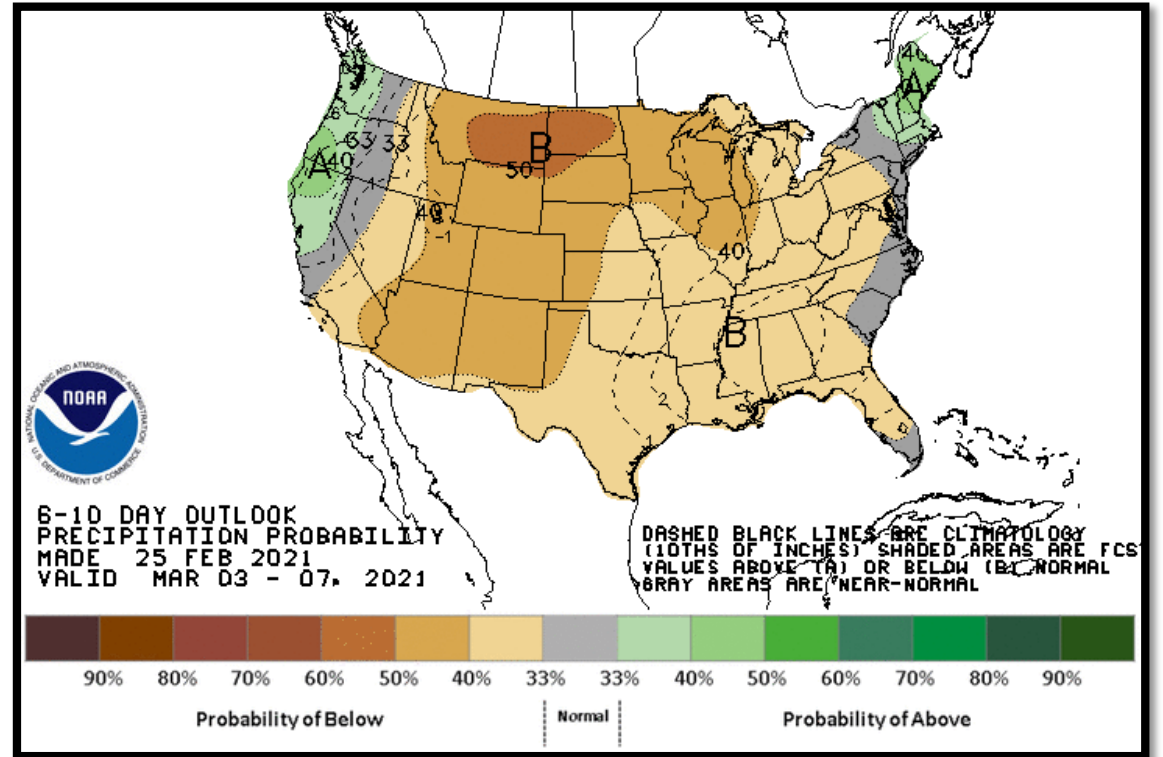


# March 3-7 Outlook

## Temperatures

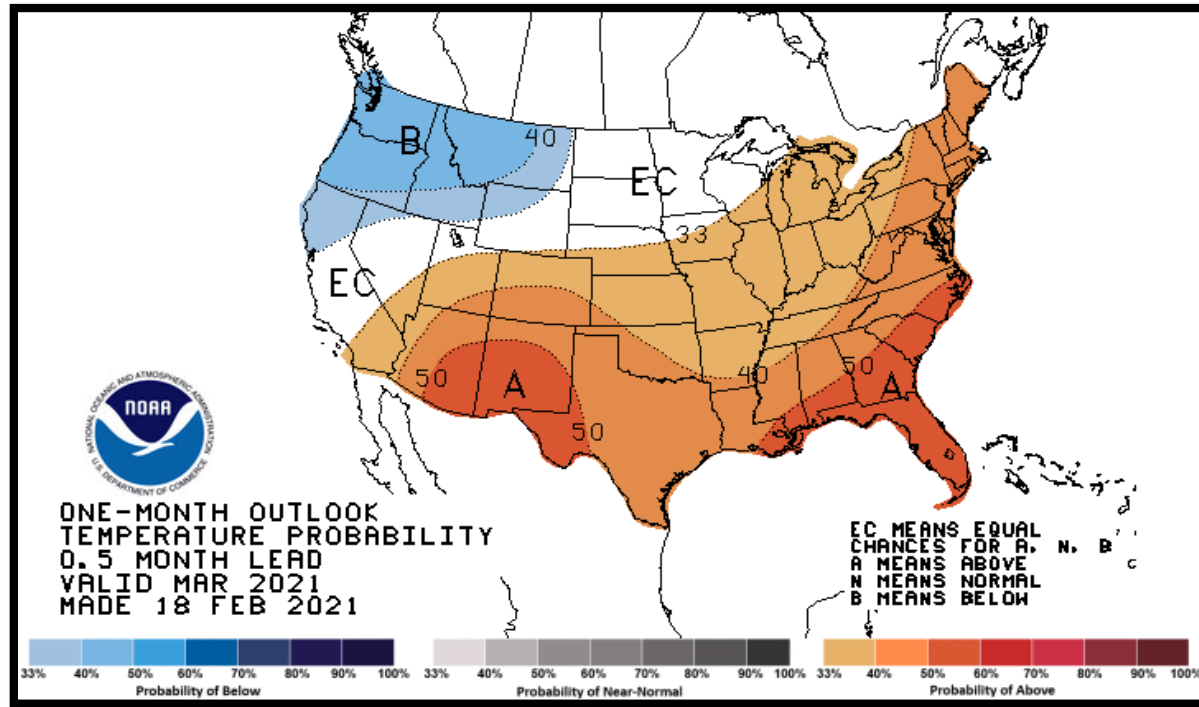


## Precipitation

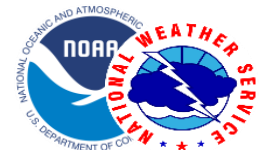
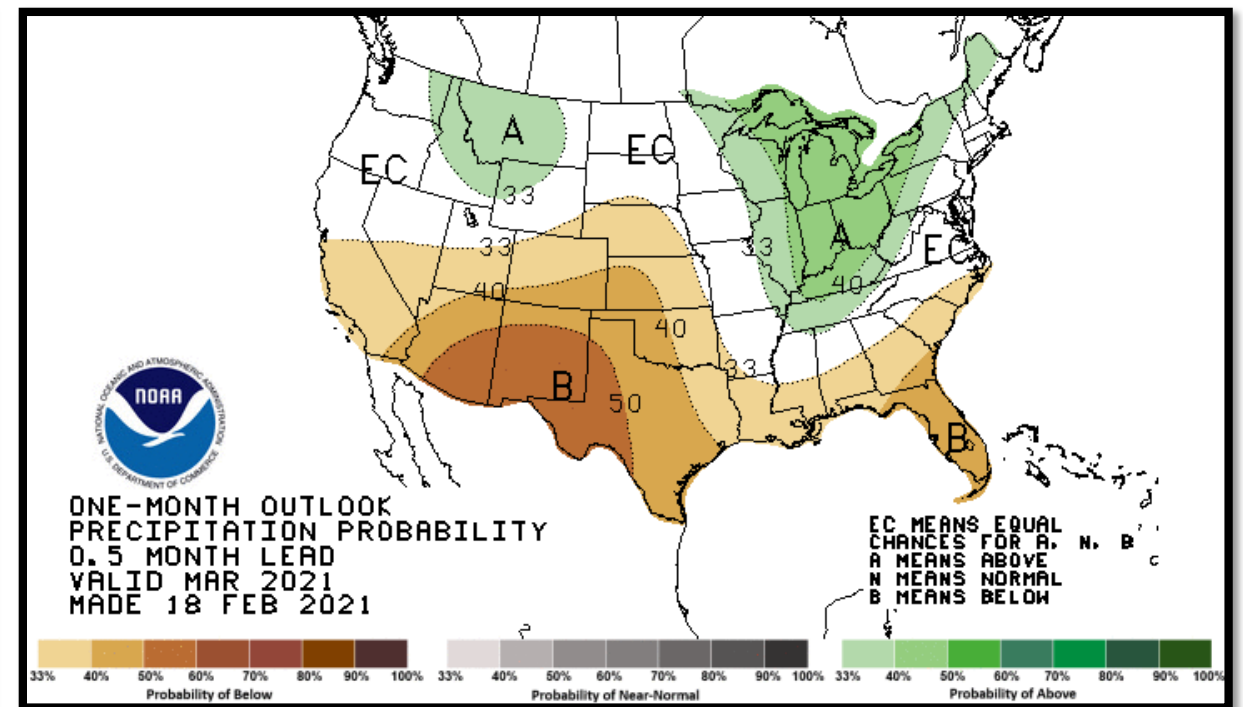


# March Outlook

## Temperatures

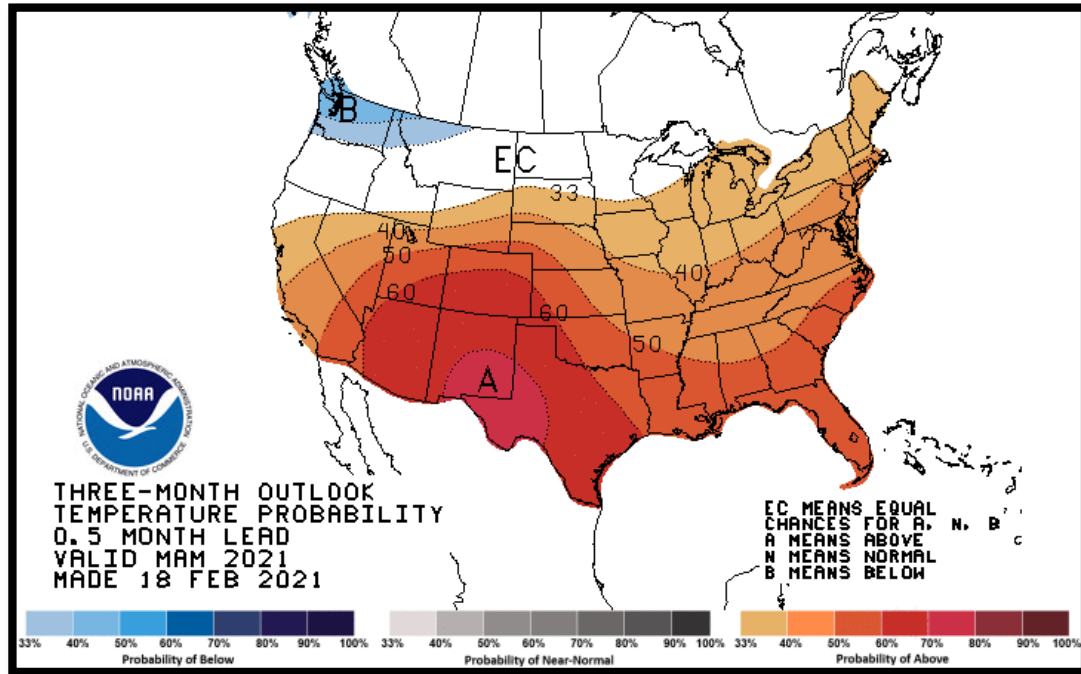


## Precipitation

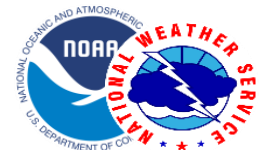
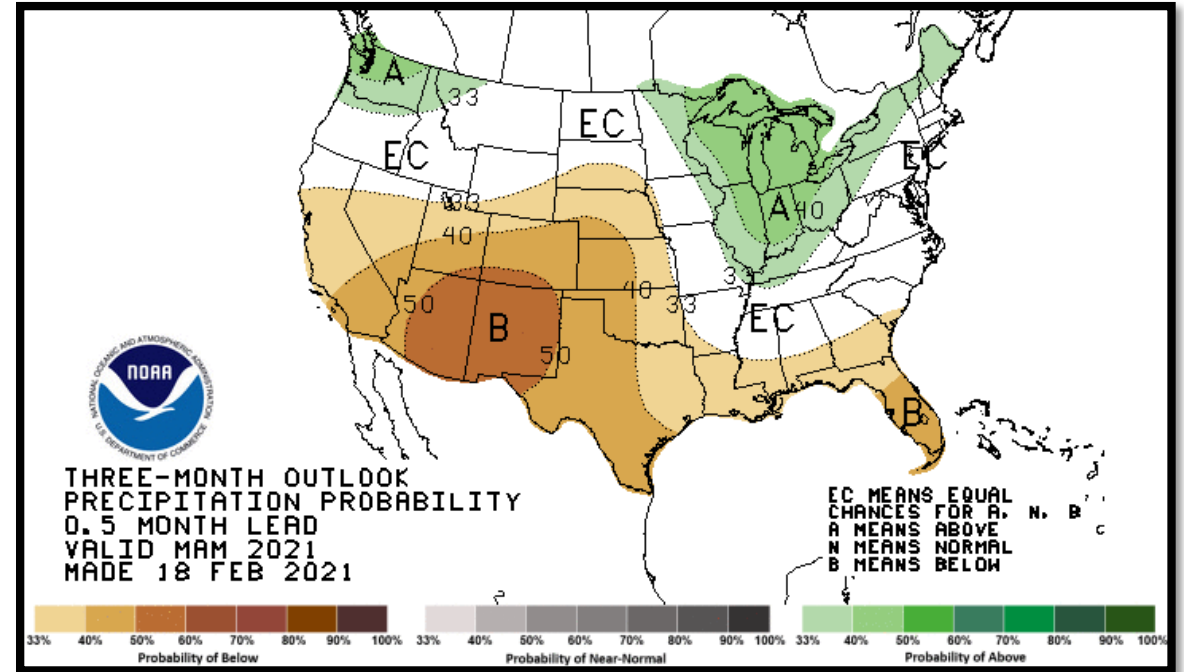


# Mar-Apr-May Outlook

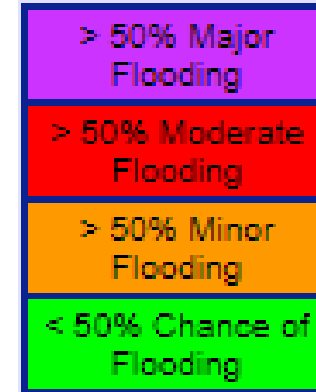
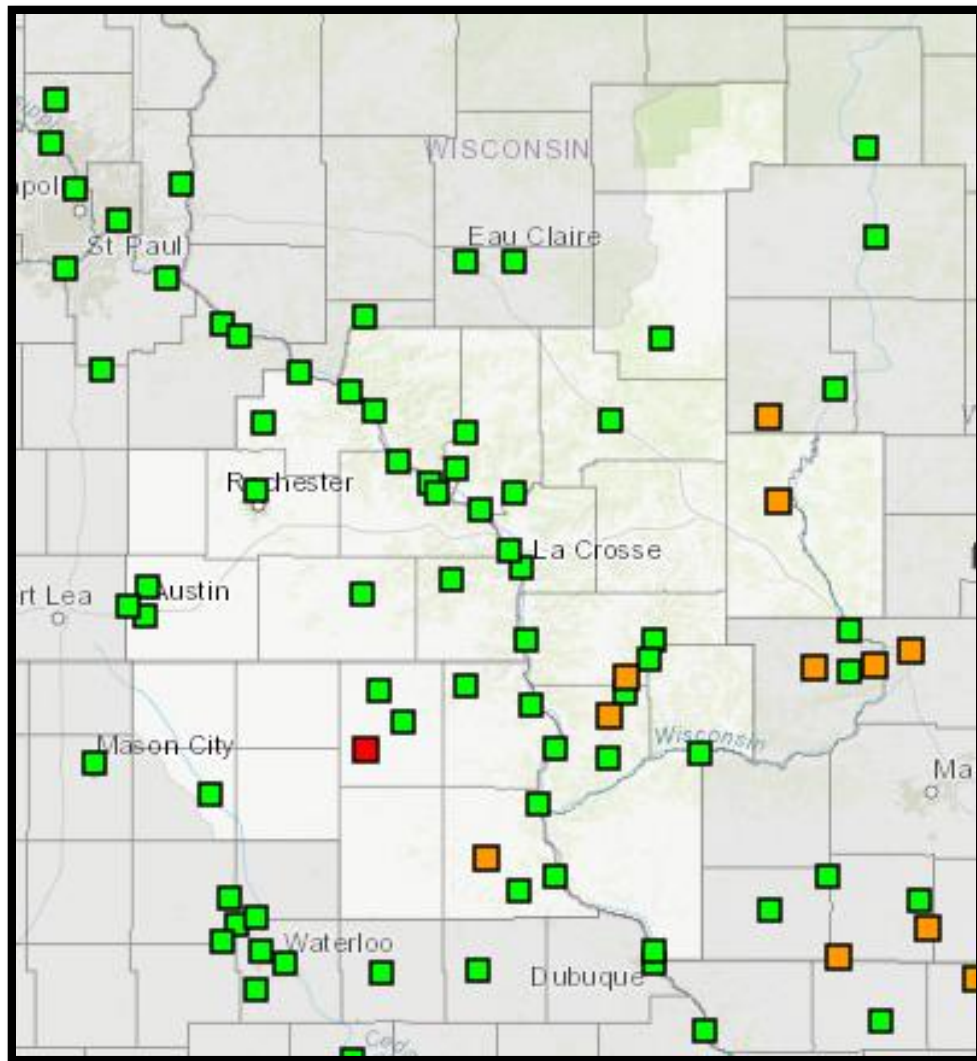
## Temperatures



## Precipitation

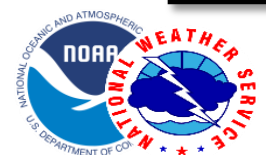


# Long-Range Probabilities



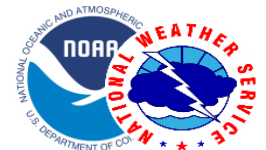
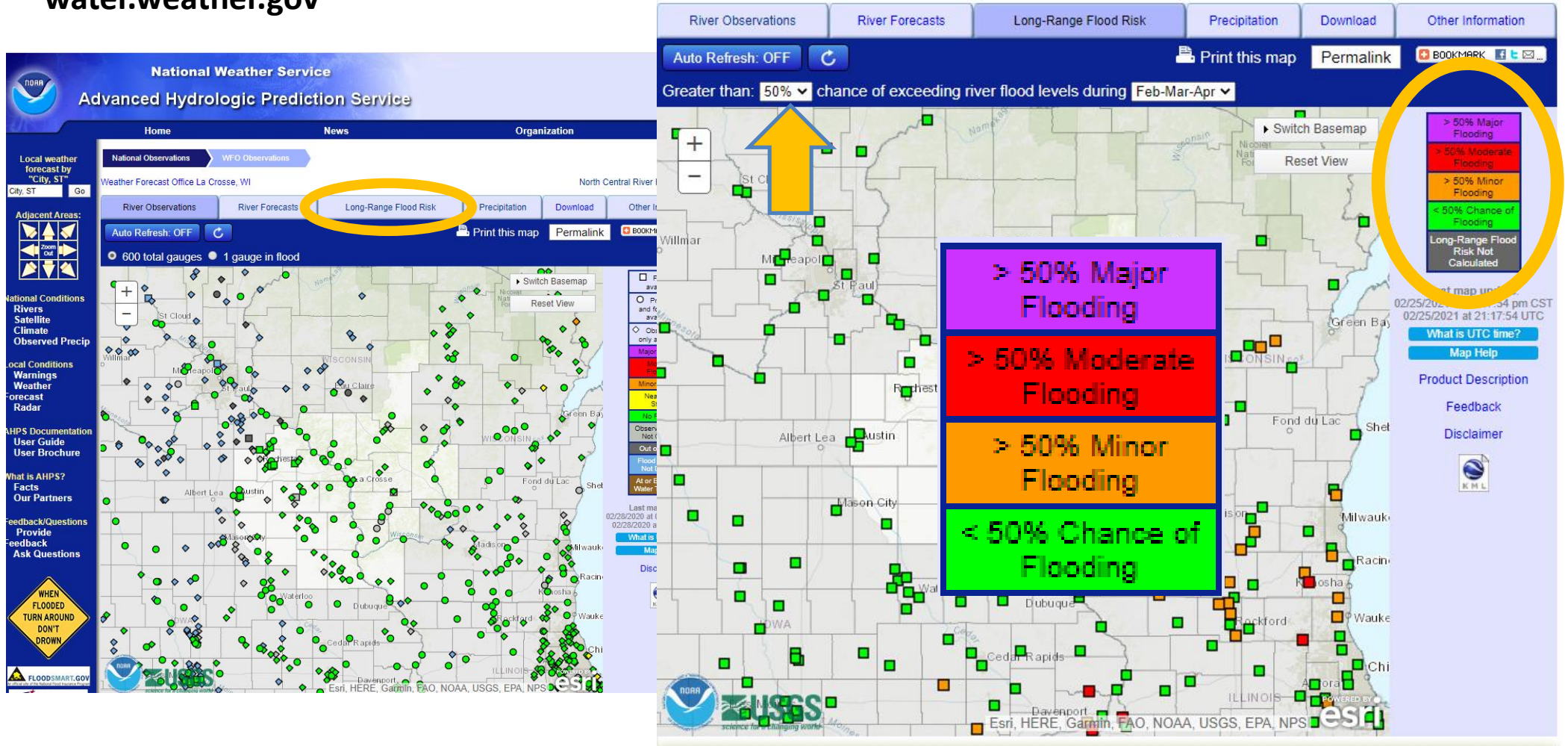
Near normal flood risk across most of the area. A few Mississippi River Tributaries have around a 50% chance of minor flooding this Spring.

The Turkey River at Spillville, IA has a 56% chance of reaching Moderate Flood Stage. Historically this location has a 36% chance of reaching Moderate Flood Stage.



# Flood Probability Information

water.weather.gov

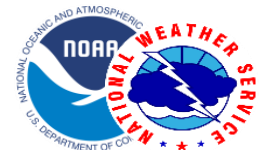
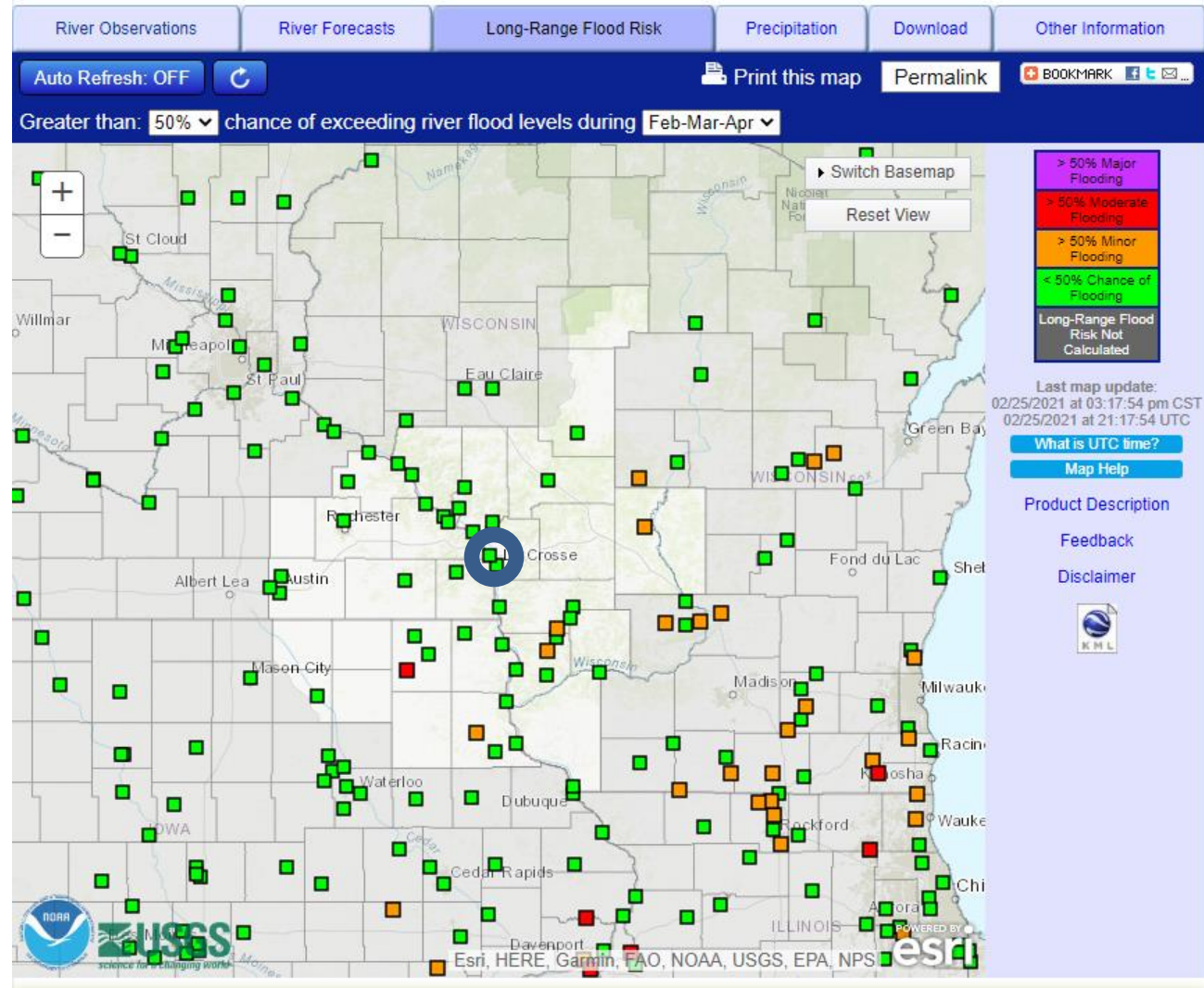


NATIONAL WEATHER SERVICE-LA CROSSE, WI

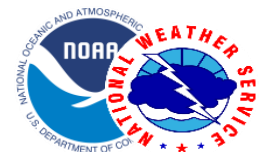
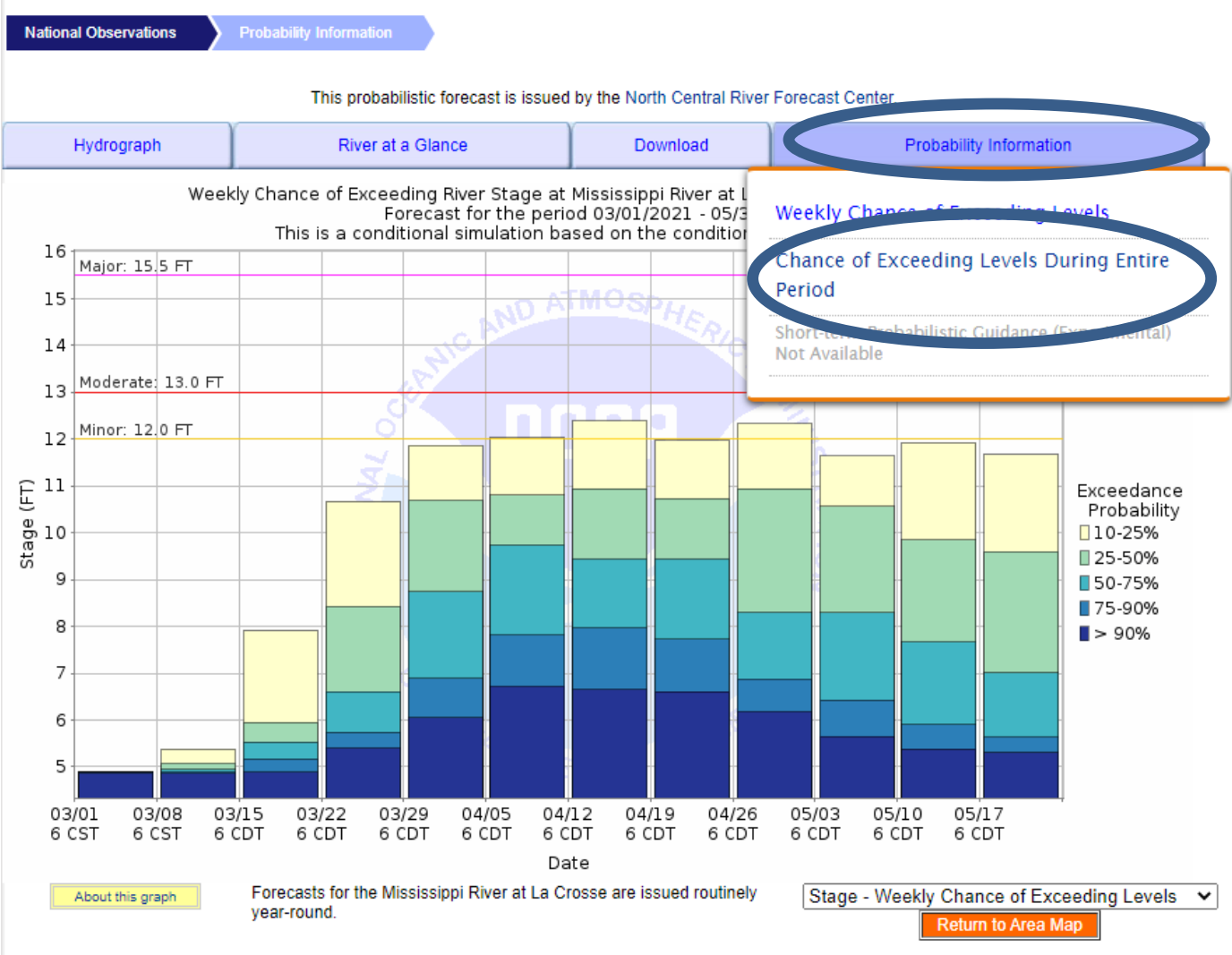
# Determining Probabilities/Flood Potential

You can click on a forecast point to get the latest information on chances for exceeding a given river stage based on river model simulations and historical data

Lets look at an example....

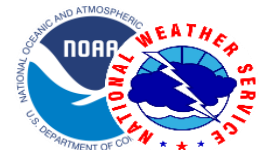
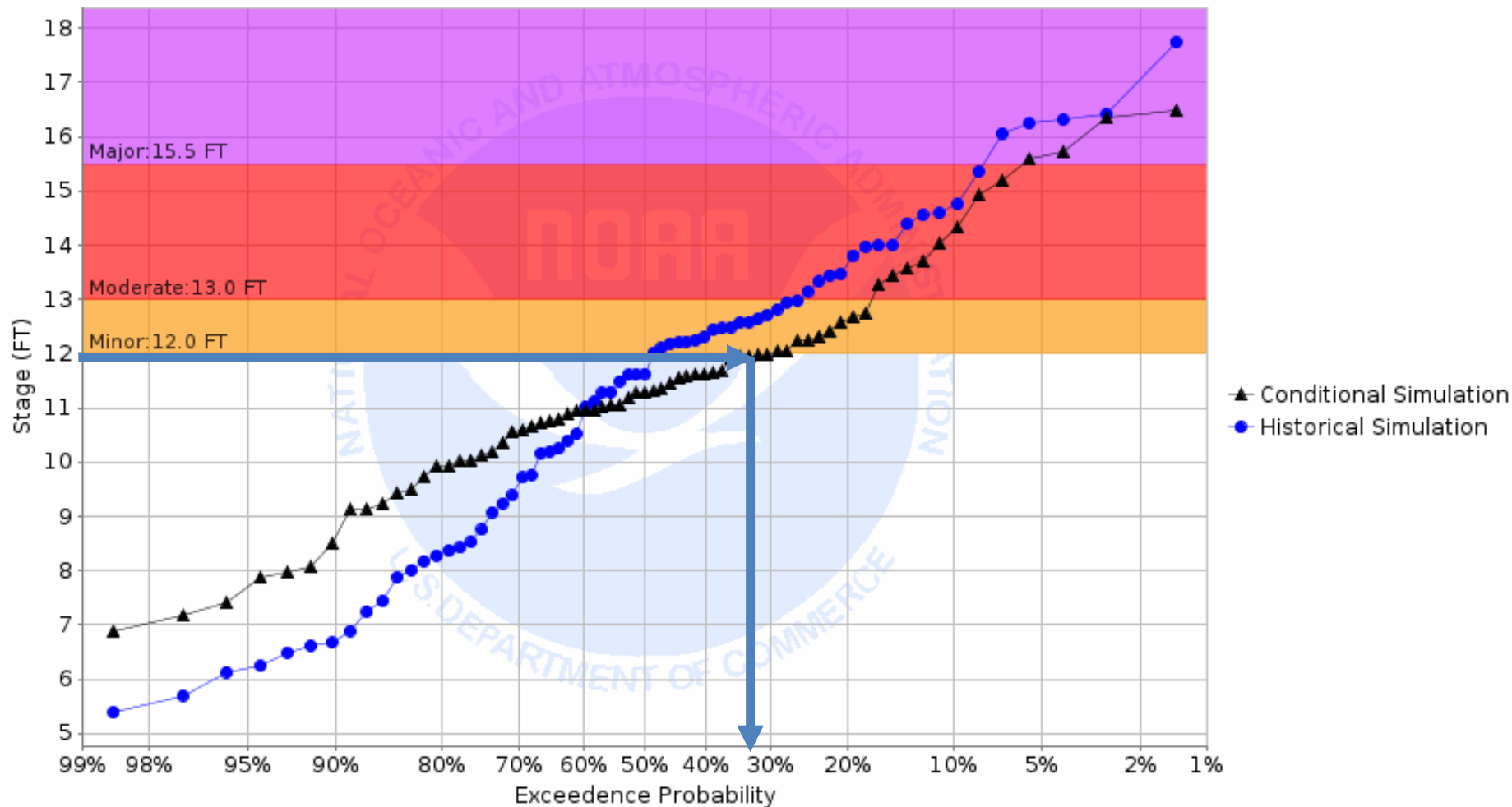


# Determining Probabilities/Flood Potential



# Determining Probabilities/Flood Potential

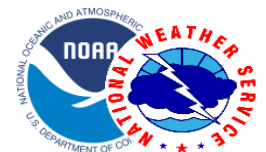
Chance of Exceeding River Stage at Mississippi River at La Crosse (Pool 8 CP) (LACW3)  
Forecast for the period 03/01/2021 - 05/30/2021  
This is a conditional simulation based on the conditions as of 02/22/2021





# Summary

- **Overall snowmelt flood risk is currently near normal.**
  - Drier conditions during the late Summer-Autumn of 2020 continued into this winter.
  - Limited snowpack this winter. Deeper snowpack over portions of northeast Iowa and southwest Wisconsin.
  - Near normal soil moisture, ground frost generally shallow 5 -16 ft
- **Cold, below normal temperatures for the first half of February. This increased ice cover and ice thickness on area rivers, possibly increasing the chances for a few ice jams. However, it appears a slow melt will continue reducing the risk for ice jams.**
- **Risk depends on future precipitation and temperature trends.**



# 2021 Spring Flood Outlook

- **Next outlook: Thursday March 11<sup>th</sup>**
- **Monitor later forecasts and information from the National Weather Service**

**Website for the latest Information:**  
[weather.gov/lacrosse/2021SpringFloodOutlook](https://weather.gov/lacrosse/2021SpringFloodOutlook)

